

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking  
Regarding Broadband Infrastructure  
Deployment and to Support Service  
Providers in the State of California.

Rulemaking 20-09-001

**Reply Comments of the Advanced Communications Law & Policy  
Institute at New York Law School to the Assigned Commissioner's  
Ruling Issued August 6, 2021**

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September 21, 2021

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**1. INTRODUCTION**

In accordance with Rule 6.2 of the California Public Utilities Commission ("Commission") Rules of Practice and Procedure, the Advanced Communications Law & Policy Institute ("ACLPI") at New York Law School respectfully submits these reply comments in Rulemaking 20-09-001. The ACLPI is a party to the proceeding.

**2. OVERVIEW OF COMMENTS**

Senate Bill 156 ("SB 156") sets forth the role of the Commission vis-à-vis assisting the state in building a statewide middle-mile network. Specifically, the statute calls on the Commission to, among other things, identify "locations" in the state where open-access middle-mile infrastructure is unavailable and assign priority status to areas where such infrastructure can be built in order to "enable last-mile service" that can deliver broadband

in excess of 25/3 Mbps.<sup>1</sup> Contrary to the positions of some commentators, this is not an open-ended inquiry into broadband networks generally. Rather, as SB 156 makes clear, the focus is on facilitating middle-mile deployment in truly unserved areas.

Having reviewed the opening comments addressing the Assigned Commissioner's Ruling,<sup>2</sup> the ACLP respectfully offers the following foundational principles as the Commission moves forward with its statutory obligations vis-à-vis the state's nascent middle-mile efforts.<sup>3</sup>

*First*, to avoid inefficient and wasteful duplication of broadband infrastructure, the Commission should interpret SB 156's definition of "open-access" middle-mile networks broadly to include *all* existing middle-mile infrastructure. This is essential to developing a clear understanding of where middle-mile resources are currently available and where they are needed. Such an understanding will help to avoid overbuilding, which, as discussed below, could undermine the sustainability of the state's middle-mile network. The plain

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<sup>1</sup> California Senate Bill 156, § 11549.54(a)-(c), [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=202120220SB156](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB156) ("SB 156").

<sup>2</sup> *Order Instituting Rulemaking Regarding Broadband Infrastructure Deployment and to Support Service Providers in the State of California*, Assigned Commissioner's Ruling, R.2009001 (Aug. 6, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M397/K312/397312171.PDF> ("Assigned Commissioner's Ruling").

<sup>3</sup> The ACLP has elected to file reply comments here – and will likely file comments in response to additional questions regarding open-access middle-mile networks posed by the ALJ – after observing several parties levy accusations of "redlining" in the context of middle-mile network deployment. *See, e.g., Comments of The Utility Reform Network*, at p. 6-7 (Sept. 3, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M405/K024/405024281.PDF> ("TURN Middle-Mile Comments"). As the ACLP discussed at length in comments to the Commission earlier in this proceeding, such accusations are misplaced based on available data and conflate a number of key issues related to the demand for and adoption of broadband services. *See* ACLP Comments (July 2, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M392/K633/392633612.PDF> ("ACLP Redlining Comments"). The ACLP seeks to build on those comments in the context of the Commission's middle-mile inquiry.

language of the statute appears to support such a reading. Ultimately, interpreting the statute in this manner will help to ensure that the state prioritizes network deployment in areas where the need for middle-mile and last-mile broadband assets is clear and uncontroversial.

*Second*, once the Commission has determined all existing open-access middle-mile assets in the state, its recommendations should support and prioritize deployment to areas that are truly unserved by broadband infrastructure of any kind. In practice, this means focusing the state’s efforts first and foremost on rural and geographically remote areas, where there are large percentages of unserved households.

Approaching the Commission’s statutory obligations in this manner will help to ensure that those who remain without broadband in the state are served as quickly and efficiently as possible.

**3. THE COMMISSION SHOULD INTERPRET “OPEN-ACCESS” BROADLY TO AVOID WASTEFUL OVERBUILDING OF MIDDLE-MILE ASSETS**

A foundational aspect of the Commission’s efforts in support of the state middle-mile network is identifying where middle-mile infrastructure already exists and where there is “no middle-mile infrastructure that is open access, with sufficient capacity, and at affordable rates.”<sup>4</sup> This stems directly from SB 156, which defines “open-access” as a network that offers “equal non-discriminatory access to eligible entities on a technology

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<sup>4</sup> *Assigned Commissioner’s Ruling* at p. 2.

and competitively neutral basis, regardless of whether the entity is privately or publicly owned.”<sup>5</sup>

The comments of some parties seem to imply that this definition comports mostly with publicly-owned middle-mile networks – *i.e.*, that true open-access networks are those owned and operated by government entities.<sup>6</sup> The plain text of the statute, though, does not support such a narrow interpretation. Indeed, the Commission is directed to catalog open-access middle-mile infrastructure “regardless of whether [it] is privately or publicly owned.” Accordingly, the Commission’s examination of the current state of middle-mile infrastructure in California should be broad and encompass privately-owned middle-mile networks that lease access to partner ISPs and institutions on commercially reasonable terms and conditions. Such an examination is especially critical for areas where broadband is already widely available, which indicate the existence of robust network infrastructure.

In addition to acceding to a clear command from the legislature, deploying a broad view of middle-mile infrastructure in the state will help to prevent inefficient and wasteful overbuilding of broadband infrastructure. Presumably, the state will want its middle-mile network to be financially self-sustaining, with revenues from third-party leases and other agreements offsetting the myriad operating expenses that will accrue annually.<sup>7</sup>

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<sup>5</sup> SB 156, § 11549.50(e).

<sup>6</sup> See, *e.g.*, *Comments of Next Century Cities* (Sept. 2, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M404/K292/404292675.PDF> (“*Next Century Cities Middle-Mile Comments*”).

<sup>7</sup> See, *e.g.*, *Comments of EFF*, at p. 5 (Sept. 3, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M405/K052/405052385.PDF> (“Given that this will be a public network that is not dependent on profits, the state is given more flexibility to offer service at prices that are consistent across its network. The state simply needs to provide access at rates that sustain the

Recommending that the state build its network in areas where middle-mile infrastructure already exists would undermine the ability of the system to self-sustain by “suppress[ing] available revenues for both networks—potentially causing both to become unsustainable.”<sup>8</sup> It would also squander funds on duplicative deployment in served areas at the expense of unserved areas, the clear focus of the statute.

The dangers of overbuilding are real and have caused some large-scale middle-mile projects to struggle or fail. A failed effort in Colorado is illustrative.<sup>9</sup> Funded in large part by a \$100 million federal grant in 2009, EAGLE-Net was positioned as a 1,600-mile statewide middle-mile fiber network that would connect rural and underserved school districts across Colorado and provide connectivity to various anchor institutions.<sup>10</sup> As the network was being built, it quickly became clear that, in many places, the infrastructure would be placed near existing middle-mile assets. Rather than “identify[] and adapt[] to these market changes, EAGLE-Net plowed forward,” overbuilding private infrastructure and eventually triggering a federal investigation.<sup>11</sup> Some attempted to defend EAGLE-Net’s efforts by

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network over the decades, which should allow it the ability to offer the lowest costs feasible in rural communities.”) (*EFF Middle-Mile Comments*).

<sup>8</sup> *Id.* at p. 6.

<sup>9</sup> The ACLP will provide the Commission with additional analyses of publicly-owned open-access middle-mile infrastructure in these reply comments (see section 4, below) and in subsequent comments offered in response to the ALJ’s Email Ruling on September 9, 2021. The Colorado example is offered as a cautionary tale and is indicative of the many risks and uncertainties facing large-scale middle-mile networks, especially those whose footprints overlap in some manner with existing middle-mile infrastructure.

<sup>10</sup> EAGLE-Net Project Overview, BTOP, U.S. Dept. of Commerce, <https://www2.ntia.doc.gov/sites/default/files/grantees/cboces.pdf>.

<sup>11</sup> Kellen O’Brien, *EAGLE-Net’s Never-Ending Odyssey: Addressing Colorado’s Unique Broadband Infrastructure Challenges*, 12 J. on Telecomm. & High Tech. L. 222, 240 (2014), [http://www.jthtl.org/content/articles/V12I1/JTHTLv12i1\\_O%27Brien.PDF](http://www.jthtl.org/content/articles/V12I1/JTHTLv12i1_O%27Brien.PDF).

distinguishing its fiber offerings from those of other middle-mile providers.<sup>12</sup> In particular, EAGLE-Net’s defenders argued that overbuilding only exists when there are multiple fiber networks in an area that offer the same functionality on the same terms and conditions.<sup>13</sup> The federal inquiry, however, defined “overbuilding” more broadly, focusing on instances where EAGLE-Net fiber was deployed “in proximity” to other middle-mile fiber.<sup>14</sup> This supported a finding of inefficient overbuild, which contributed materially to the network’s financial struggles.<sup>15</sup> Eventually, a private entity was engaged to “take[] over the responsibility of managing Colorado’s beleaguered EAGLE-Net.”<sup>16</sup>

For these reasons, it is respectfully submitted that the Commission undertake a comprehensive inventory of all middle-mile network assets in California and adjust its proposed route for the state’s middle-mile project to avoid overlapping deployment. Doing so will avoid wasteful, unnecessary, and inefficient overbuild, and ensure that the focus of the state is on directing resources to areas that need it most.

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<sup>12</sup> See, e.g., *EAGLE-Net in Context: An Analysis of the Processes and Benefits of Middle-Mile Broadband Projects*, CTC Technology & Energy (Nov. 28, 2012), <https://www.ctcnet.us/EAGLE-Net.pdf>.

<sup>13</sup> *Id.* at p. 8-9.

<sup>14</sup> See *Letter from Todd J. Zinser, Inspector General, U.S. Department of Commerce, to the Honorable Greg Walden, Chair, Subcommittee on Communications and Technology, House Committee on Energy and Commerce et al.*, at p. 9, Jan. 23, 2014, <https://www.oig.doc.gov/OIGPublications/OIG-14-011-M.pdf>.

<sup>15</sup> See generally *id.*

<sup>16</sup> Sean Buckley, *Zayo Takes Over Management of Colorado’s Trouble EAGLE-Net Alliance*, July 20, 2015, Fierce Telecom, <https://www.fiercetelecom.com/telecom/zayo-takes-over-management-colorado-s-troubled-eagle-net-alliance>.

4. **THE COMMISSION’S FINAL RECOMMENDATIONS SHOULD PRIORITIZE BUILD OUT OF THE STATE’S MIDDLE-MILE NETWORK TO RURAL UNSERVED AREAS**

Some commentors have called on the Commission to recommend an expansive footprint for the state’s middle-mile network. This is not only unwise considering the myriad downsides associated with overbuilding existing infrastructure (per section 3, above), but it is also in direct contravention of the statute. SB 156 clearly defines the Commission’s purview on this matter, requesting input on how and where to prioritize deployment in areas that are unserved by middle-mile network infrastructure capable of “enable[ing] last-mile connections to residences unserved by [25/3 Mbps]” broadband service.<sup>17</sup>

Even so, some commentors have recommended that the Commission consider a range of other factors when identifying priority areas for middle-mile deployment. These include areas where a “large proportion” of the population is below the federal poverty line;<sup>18</sup> areas with “limited [last-mile] competition;”<sup>19</sup> and areas with low broadband adoption rates.<sup>20</sup> Others have called on the Commission to ensure that urban areas, which are generally well served by multiple middle- and last-mile service providers,<sup>21</sup> receive priority status similar to that of rural areas, many of which lack *any* middle- or last-mile

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<sup>17</sup> SB 156, § 11549.54(d).

<sup>18</sup> See, e.g., *Comments of the Greenlining Institute*, at p. 4 (Sept. 3, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M405/K052/405052387.PDF> (“Greenlining Middle-Mile Comments”); *EFF Middle-Mile Comments* at p. 9.

<sup>19</sup> *Greenlining Middle-Mile Comments* at p. 4.

<sup>20</sup> See, e.g., *id.* at p. 5.

<sup>21</sup> See generally *ACLP Redlining Comments*.



infrastructure.<sup>22</sup> One justification for prioritizing urban areas in this manner appears to be a desire to reverse “historical practices of digital redlining.”<sup>23</sup>

These and many other factors may inform and ultimately shape broadband policy. However, in this instance, most are beyond the scope of the Commission’s limited, focused mandate established by SB 156. Moreover, most of the extraneous factors raised by commentors describe areas where broadband infrastructure – middle-mile and last-mile – is presumably already available. As such, integrating these factors into the Commission’s analysis and recommendations would undermine the statutory goal of facilitating middle- and last-mile broadband deployment in areas that currently lack it.

The commentors proposing that these factors inform the Commission’s recommendations also conflate middle-mile and last-mile infrastructure as commonly understood and as defined in the Assigned Commissioner’s Ruling.<sup>24</sup> Low broadband adoption rates on their own do not indicate that middle- or last-mile infrastructure in a particular area is inadequate or unavailable. As the ACLP discussed at length in previous comments, numerous factors, including income, impact whether a consumer chooses to adopt broadband.<sup>25</sup> This is the case in many of the communities where some parties have accused ISPs of “digital redlining.”<sup>26</sup> That adoption rates among low-income households might lag in certain neighborhoods does not mean that middle-mile infrastructure is

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<sup>22</sup> See, e.g., *Next Century Cities Middle-Mile Comments*.

<sup>23</sup> See, e.g., *TURN Middle-Mile Comments* at p. 8.

<sup>24</sup> *Assigned Commissioner’s Ruling* at p. 4

<sup>25</sup> *ACLP Redlining Comments*.

<sup>26</sup> *Id.*

unavailable or that last-mile offerings are poor or “uncompetitive.” Rather, it indicates an opportunity to focus resources (*e.g.*, service and device subsidies) and interventions (*e.g.*, digital literacy training) on bolstering demand for, and adoption of, broadband.<sup>27</sup>

As it continues forward with this middle-mile inquiry, the ACLP respectfully proposes that the Commission employ a two-pronged strategy to assure the development of impactful recommendations.

*First*, identify areas that lack the kinds of infrastructure noted in the statute, namely middle-mile and last-mile infrastructure capable of enabling broadband connections of at least 25/3 Mbps. As discussed above, these unserved and underserved areas are the primary, if not exclusive, focus of SB 156’s middle-mile project. Confining the Commission’s inquiry and recommendations to these areas will assure compliance with the statute’s mandate and, more importantly, ensure that the state is able to prioritize network deployment to those Californians who lack access to broadband of any kind.

*Second*, the Commission should work to ensure that the state’s middle-mile network is not a “bridge to nowhere.” In other words, the Commission, to the extent possible, should collaborate closely with ISPs to identify whether and to what extent there are providers ready, willing, and able to harness newly built middle-mile infrastructure for the expeditious deployment of last-mile networks in unserved areas, *i.e.*, where no middle-mile infrastructure previously existed.

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<sup>27</sup> *Id.*

Commentors have suggested that the Commission evaluate statewide middle-mile efforts in Massachusetts and Kentucky, among others, to glean best practices and lessons learned.<sup>28</sup> The ACLP supports such an examination, especially as it pertains to gauging the willingness of ISPs to leverage state-owned middle-mile infrastructure to enable last-mile service.<sup>29</sup>

In both Massachusetts and Kentucky, state officials overestimated the demand for newly deployed middle-mile infrastructure among both public and private ISPs.

- In Massachusetts, the original vision for its middle-mile network was to serve as a means of facilitating last-mile deployment by municipalities and other ISPs in unserved and underserved parts of the state. That effort quickly struggled due to, among other things, operational and sustainability concerns of some of the city-led broadband efforts.<sup>30</sup> Now, the state primarily focuses its resources on supporting last-mile deployment by private ISPs, either on their own or in partnership with municipalities.<sup>31</sup>

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<sup>28</sup> See, e.g., *TURN Middle-Mile Comments* at p. 10-11.

<sup>29</sup> As previously noted, the ACLP will likely submit further comments on other statewide middle-mile networks in response to the ALJ's Email Ruling on September 9, 2021.

<sup>30</sup> See, e.g., Lisa Gonzalez, *Shoot-Out Over the WiredWest: MBI Pulls Funding in Massachusetts Saga*, Jan. 27, 2016, Community Networks, <https://muninetworks.org/content/shoot-out-over-wiredwest-mbi-pulls-funding-massachusetts-saga>.

<sup>31</sup> See, e.g., Diane Brancaccio, *MBI Changes Broadband Course*, May 10, 2016, Greenfield Recorder, <https://www.recorder.com/MBI-changes-broadband-course-2046546>. See also MBI, Flexible Grant Program, <https://broadband.masstech.org/last-mile-programs/flexible-grant-program>. The state's middle-mile network still serves as a means of facilitating deployment by municipal ISPs, but such uses appear to be limited.

- After years of delays and costly budget overruns, Kentucky’s long-troubled middle-mile network, KentuckyWired, is inching towards completion.<sup>32</sup> However, it has yet to forge many, if any, meaningful partnerships with ISPs to deploy last-mile networks in unserved and underserved parts of the state.<sup>33</sup> As a result, numerous households that were promised last-mile broadband access enabled by KentuckyWired remain unconnected and without an on-ramp to the internet.<sup>34</sup>

Employing this two-pronged approach and applying lessons learned from other statewide middle-mile network efforts will ensure that the Commission’s recommendations reflect and address the difficult realities of finally bringing broadband to unserved areas.

## 5. CONCLUSION

The Commission and the state are to be applauded for pursuing a collaborative, data-driven inquiry in support of California’s forthcoming middle-mile network. The state is poised to spend a significant amount of money on a vast network that will be difficult to build, operate, maintain, secure, and upgrade. As such, working in close partnership with expert entities – especially ISPs with a demonstrated track-record – and using their

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<sup>32</sup> For an overview of these troubles, see Alfred Miller, *Kentucky’s \$1.5 Billion Information Highway to Nowhere*, May 8, 2019, Louisville Courier-Journal, <https://www.propublica.org/article/matt-bevin-kentucky-information-highway-high-speed-internet>.

<sup>33</sup> See, e.g., Alfred Miller, *KentuckyWired Promised Broadband and High-Tech Jobs. Will it Ever Deliver?*, Jan. 15, 2020, Louisville Courier-Journal, <https://www.courier-journal.com/story/news/politics/2020/01/15/kentuckywired-projects-unclear-future-leaves-state-reeling/4307356002/>.

<sup>34</sup> *Id.*

feedback to calibrate the scope of this monumental undertaking will increase the chances of this initiative succeeding over the long term.

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